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10/772,096	02/03/2004	Philipp H. Schmid	M61.12-0620	2574

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WESTMAN CHAMPLIN (MICROSOFT CORPORATION)  
SUITE 1400  
900 SECOND AVENUE SOUTH  
MINNEAPOLIS, MN 55402-3319

EXAMINER
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KOVACEK, DAVID M

ART UNIT	PAPER NUMBER
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2626

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/772,096

**Applicant(s)**

SCHMID ET AL.

**Examiner**

DAVID KOVACEK

**Art Unit**

2626

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4-26 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-26 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is in response to the applicant's amendment, filed 03/21/2008, in which the applicant submits amendments to the claims, and provides remarks that argue for allowability over the cited prior art.

### ***Response to Amendment***

2. The amendments to **claim 6** with regard to the specified informalities cited in the previous Office Action have been considered and are accepted. The previous objection(s) to **claim 6** has been withdrawn.

3. The amendments to the claims have been considered and are accepted. It is noted by the examiner that acceptance of the formal conditions of the claims does not indicate allowability over the prior art. Appropriate rejections are provided in the relevant sections of this Office Action below.

### ***Response to Arguments***

4. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

5. Applicant's arguments, see Remarks, filed 03/21/2008, with respect to the objection and rejection under 35 USC §112, first paragraph to **claim 14**, have been fully

considered and are persuasive. The objection and rejection under 35 USC §112, first paragraph of **claim 14** have been withdrawn.

6. Applicant's arguments with respect to **claims 1, 4-26 and 30** have been considered but are moot in view of the new ground(s) of rejection. The appropriate rejections for each claim are presented in the relevant sections of this Office Action below.

***Claim Rejections - 35 USC § 102***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. **Claims 1, 4-7, 26 and 30** are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Application Publication 2002/0198719, hereinafter referred to as Gergic.

Regarding **claim 1**, Gergic discloses a computer readable medium storing:

- a managed code layer [reusable dialog components, dialog framework, dialog beans] having a speech-related object model [interaction objects] comprising objects exposing speech-related members for use by speech-related applications (Page 21, paragraphs 0082, 0090),

Though not explicitly disclosed by Gergic, it is well known in the art that JavaBeans are used for implementing a managed code layer, in which computer program code (the dialog processes) are executed under the management of a virtual machine (the JavaBeans).

- the speech-related applications comprising one or more of speech recognition enabled applications and speech synthesis enabled applications [dialogs with the user], the speech-related members of the objects used in performing speech processing tasks ["dialog module" objects], comprising one or more of speech recognition and speech synthesis [dialog] (Page 21, paragraph 0090; Page 23, paragraph 0112);

Though not explicitly disclosed by Gergic, the limitations of speech recognition and speech synthesis are each inherent in the disclosure of the use of VoiceXML.

- wherein the managed code layer also includes a non-speech related object model [service objects] comprising objects exposing non-speech related members for use by applications to perform non-speech related processing tasks [access data sources] (Page 21, paragraph 0082); and

- wherein the speech-related object model and non-speech related object model are accessed using accessing techniques that are the same for both object models (Page 21, paragraphs 0082-0090).

Though Gergic does not explicitly disclose the same accessing techniques for both object models, this is inherent in disclosing that each object model is encapsulated within a JavaBean, meaning that the same accessing methods will be available to each object model.

Regarding **claim 4**, Gergic discloses all limitations of **claim 1**, and further discloses that the non-speech related members exposed by a non-speech related object in the non-speech related object model include methods [affect the state of the dialog], properties acted on by the methods [the dialog], and events triggered by a state of the non-speech related object [confirmation of success, failure, or completion] (Page 23, paragraphs 0109-0110).

Regarding **claim 5**, Gergic discloses all limitations of **claim 4** as applied above, and further discloses that the speech-related members exposed by a speech-related object in the speech-related object model include methods [process of dialogs, dialog logic], properties acted on by the methods [dialogs, fields], and events triggered by a state of the

speech-related object [acoustic verification, content verification] (Page 23, paragraph 0112; Page 24, paragraphs 0114-0115).

Regarding **claim 6**, Gergic discloses all limitations of **claim 5** as applied above, and further discloses that the speech-related members and non-speech related members are designed to be specified and invoked in a consistent way (Page 21, paragraph 0082-0083).

This limitation is inherent in disclosing that each object model is encapsulated within a JavaBean, meaning that the same accessing methods will be available to each object model.

Regarding **claim 7**, Gergic discloses all limitations of **claim 1** as applied above, and further discloses that the speech-related object model includes a recognizer object configured to represent a speech recognizer [speaker identification] (Page 24, paragraph 0114).

Regarding **claim 26**, this claim is very similar to **claim 1**, and is rejected for the same reasons.

Regarding **claim 30**, Gergic discloses all limitations of **claim 26** as applied above, and further discloses that the speech-related objects include a dynamic grammar object that exposes members accessible to

implement a dynamic grammar [beans can be used to dynamically compile grammars] (Page 4, paragraph 0053; Page 21, paragraph 0081).

***Claim Rejections - 35 USC § 103***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
10. **Claims 8-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gergic in view of US Patent Application Publication 2002/0055844, hereinafter referred to as L'Esperance.

Regarding **claim 8**, Gergic discloses all limitations of **claim 7** as applied above. Gergic additionally implies that a grammar object model is configured to represent a grammar (Page 4, paragraphs 0049, paragraph 0053; Page 21, paragraphs 0077-0078) in disclosing a dynamically generated grammar created using distributed object models encapsulated in JavaBeans.

L'Esperance discloses a grammar object configured to represent a grammar used by the recognizer object in recognizing speech [speech recognition process grammars] (Page 5, paragraph 0073).

The two references are combinable because each is directed to a dialog management system that makes use of distributed objects within a managed code



layer. Though L'Esperance is directed to component object model (COM) objects, and Gergic is directed to JavaBean implementation, Gergic specifically discloses the similarities between JavaBeans and COM objects as managed code layer implementations (Page 21, paragraph 0078).

L'Esperance further provides motivation to combine in disclosing utility of a speech manager interface in order to provide access for other application processes to speech processing operations (Page 1, paragraph 0014 - Page 2, paragraph 0014).

Therefore, the examiner contends that it would have been obvious to one of ordinary skill in the art to combine the teachings of Gergic using the teachings of L'Esperance in order to implement a dialog management system using distributed objects within a managed code layer that includes a speech manager interface in order to provide access for other application processes to speech processing operations.

Regarding **claim 9**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and Gergic further discloses that a speech-related object model [VoiceXML dialog bean] can include a result object to represent a recognition result [return results] (Page 21, paragraph 0090).

Regarding **claim 10**, Gergic in view of L'Esperance discloses all limitations of **claim 9** as applied above, and Gergic further discloses that the speech-related object model includes an events handler object [service objects]

configured to handle events generated by recognizer object (Page 24, paragraphs 0115, 0119).

Regarding **claim 11**, Gergic discloses all limitations of **claim 7** as applied above. Gergic does not disclose, but L'Esperance discloses a local recognizer object [speech recognition process] controlled by a process [dialogue manager module] that instantiated the local recognizer object (Page 5, paragraphs 0073-0074).

Though L'Esperance does not exactly disclose the limitation of a process controlling an object, it is implied that the dialogue manager module controls the speech recognition process by an additional module [speech manager 121], which is an analogous implementation.

The limitations of **claim 11** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 11** is the same as applied above to **claim 8**.

Regarding **claim 12**, Gergic in view of L'Esperance discloses all limitations of **claim 11** as applied above, and Gergic further discloses that the recognizer object comprises a system recognizer object shared by multiple processors [public resource, reusable dialog components] (Page 4, paragraph 0057-0059).

Regarding **claim 13**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and Gergic further discloses objects based upon XML [VoiceXML objects] (Page 4, paragraph 0049).

Regarding **claim 14**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and L'Esperance further discloses dictation grammar object representing a dictation grammar [language model 113] (Page 1, paragraph 0013).

The limitations of **claim 14** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 14** is the same as applied above to **claim 8**.

Regarding **claim 15**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and Gergic further discloses a dynamically created grammar object that is created at runtime (Page 4, paragraph 0053; Page 21, paragraph 0081).

Regarding **claim 16**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and L'Esperance further discloses that the grammar represented by the grammar object has semantic properties associated with rules therein [language model] (Fig. 1, element 117; Page 1, paragraph 0013).

The limitations of **claim 16** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 16** is the same as applied above to **claim 8**.

Regarding **claim 17**, Gergic in view of L'Esperance discloses all limitations of **claim 16** as applied above, and L'Esperance further discloses that semantic properties are emitted based on one of a plurality of different mechanisms [language model, acoustic model] (Fig. 1, elements 115, 117; Page 1, paragraph 0013).

The limitations of **claim 16** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 16** is the same as applied above to **claim 8**.

Regarding **claim 18**, Gergic in view of L'Esperance discloses all limitations of **claim 17** as applied above, and Gergic further discloses that the speech-related object model exposes members to provide the semantic properties in a consistent form regardless of the mechanism used to emit the semantic properties [browser independent] (Page 20, paragraphs 0068-0069).

Regarding **claim 19**, Gergic discloses all limitations of **claim 1** as applied above, and further implies a speech synthesizer in disclosing a dialog object (Page 24,

paragraph 0114). L'Esperance additionally discloses a voice object configured to represent a speech synthesizer [text-to-speech module] (Fig. 1, element 108; Page 5' paragraph 0074).

The limitations of **claim 19** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 19** is the same as applied above to **claim 8**.

Regarding **claim 20**, Gergic in view of L'Esperance discloses all limitations of **claim 19** as applied above, and Gergic further discloses synchronous [I/O processing] and non-synchronous [mixed-initiative] operation (Page 23, paragraph 0112; Page 24, paragraphs 0115, 0117).

Regarding **claim 21**, Gergic in view of L'Esperance discloses all limitations of **claim 19** as applied above, and Gergic further discloses specifying a synthesizer [Natural Language Generation processing object] based on voice characteristics [attribute value pairs] (Page 24, paragraph 0114).

Regarding **claim 22**, Gergic in view of L'Esperance discloses all limitations of **claim 19** as applied above, and Gergic further discloses that a speech-related object model includes an object representing attributes of a synthesized voice [<param> element](Page 23, paragraph 0105; Page 24, paragraph 0114).

Regarding **claim 23**, Gergic in view of L'Esperance discloses all limitations of **claim 19** as applied above, and Gergic further discloses a synthesis event handler [interaction object] configured to handle events generated by the voice object (Page 24, paragraphs 0115, 0119).

11. **Claims 24-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gergic in view of Beutnagel (US Patent 6,078,885), cited in a previous Office Action.

Regarding **claim 24**, Gergic discloses all limitations of **claim 1** as applied above. Gergic does not disclose, but Beutnagel discloses a first grammar object [dictionary 110] and second grammar object [dictionary of generator 105], wherein the first grammar object has a rule referring to rules in the second grammar object (Col. 4, lines 19-21, 27-31; Col. 5, lines 45-56; Col. 8, lines 06-13).

The references are combinable because each is directed to a user-modifiable dialog system that allows for user speech input. Beutnagel further provides motivation to combine the references in disclosing the need for customization of phonetic dictionaries of a speech system to improve accuracy of the system in response to differing geological dialects (Col 1. lines 23-26).

Therefore, the examiner contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Gergic using the teachings of Beutnagel in order to implement a user-modifiable dialog

system that allows for user speech input and further allows for customization of phonetic dictionaries to improve system accuracy in response to a geological dialect.

Regarding **claim 25**, Gergic in view of Beutnagel discloses all limitations of **claim 24** as applied above, and Beutnagel further discloses a maintenance component that updates the first grammar [recognition grammar, entering in dictionary] when the referred to rule in the second grammar changes (Fig. 1, element 120; Fig. 2; Col. 5, lines 45-46; Col. 7, line 67 – Col. 8, line 05).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID KOVACEK whose telephone number is (571)270-3135. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2626

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DMK 04/03/2008

/David R Hudspeth/  
Supervisory Patent Examiner, Art Unit 2626